

General

Title

Stroke: percentage of ischemic stroke patients treated with IV or IA thrombolytic (t-PA) therapy or who undergo mechanical endovascular reperfusion therapy for whom a 90 day (greater than or equal to 75 days and less than or equal to 105 days) Modified Rankin Scale (mRS) is obtained via telephone or in-person.

Source(s)

The Joint Commission. Disease-specific care certification program. Comprehensive stroke: performance measurement implementation guide. Oakbrook Terrace (IL): The Joint Commission; 2015 Mar. 278 p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of ischemic stroke patients treated with intra-venous (IV) or intra-arterial (IA) thrombolytic (t-PA) therapy or who undergo mechanical endovascular reperfusion therapy for whom a 90 day (greater than or equal to 75 days and less than or equal to 105 days) Modified Rankin Scale (mRS) is obtained via telephone or in-person.

Rationale

The Modified Rankin Scale (mRS) is the accepted standard for assessing recovery post-stroke. As such, it has become the most widely used clinical outcome measure for stroke clinical trials. Scores are used to measure the degree of disability or dependence in activities of daily living. Score reliability and reproducibility are improved through use of a structured interview by a trained evaluator. Interviews may

be conducted in-person or over the phone. According to guideline recommendations from the American Heart Association/American Stroke Association, standardized interviews to obtain a mRS score should be conducted for acute ischemic stroke patients treated with intravenous (IV) or intra-arterial (IA) thrombolytic (t-PA) therapy or mechanical endovascular reperfusion therapy at 3 months (90 days); however, recovery may continue well beyond 3 months for many ischemic stroke patients.

Evidence for Rationale

Adams HP, del Zoppo G, Alberts MJ, Bhatt DL, Brass L, Furlan A, Grubb RL, Higashida RT, Jauch EC, Kidwell C, Lyden PD, Morgenstern LB, Qureshi AI, Rosenwasser RH, Scott PA, Wijdicks EF, American Heart Association, American Stroke Association Stroke Council, Clinical Cardiology Council, Cardiovascular Radiology and Intervention Council, Atherosclerotic Peripheral Vascular Disease and Quality of Care Outcomes in Research Interd[TRUNC]. Guidelines for the early management of adults with ischemic stroke: a guideline from the American Heart Association/American Stroke Association Stroke Council, Clinical Cardiology Council, Cardiovascular Radiology and Intervention Council, and the Atherosclerotic Peripheral Vascular Disease and Quality of Care Outcomes in Research Interdisciplinary Working Groups: the American Academy of Neurology affirms the value of this guideline as an educational tool for neurologists. *Stroke*. 2007 May;38(5):1655-711. [PubMed](#)

Banks JL, Marotta CA. Outcomes validity and reliability of the modified Rankin scale: implications for stroke clinical trials: a literature review and synthesis. *Stroke*. 2007 Mar;38(3):1091-6. [PubMed](#)

Bruno A, Akinwuntan AE, Lin C, Close B, Davis K, Baute V, Aryal T, Brooks D, Hess DC, Switzer JA, Nichols FT. Simplified modified Rankin scale questionnaire: reproducibility over the telephone and validation with quality of life. *Stroke*. 2011 Aug;42(8):2276-9. [PubMed](#)

Jauch EC, Saver JL, Adams HP, Bruno A, Connors JJ, Demaerschalk BM, Khatri P, McMullan PW, Qureshi AI, Rosenfield K, Scott PA, Summers DR, Wang DZ, Wintermark M, Yonas H, American Heart Association Stroke Council, Council on Cardiovascular Nursing, Council on Peripheral Vascular Disease, Council on Clinical Cardiology. Guidelines for the early management of patients with acute ischemic stroke: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2013 Mar;44(3):870-947. [PubMed](#)

Leifer D, Bravata DM, Connors JJ, Hinchey JA, Jauch EC, Johnston SC, Latchaw R, Likosky W, Ogilvy C, Qureshi AI, Summers D, Sung GY, Williams LS, Zorowitz R, American Heart Association Special Writing Group of the Stroke Council, Atherosclerotic Peripheral Vascular Disease Working Group, Council on Cardiovascular Surgery and Anesthesia, Council on Cardiovascular Nursing. Metrics for measuring quality of care in comprehensive stroke centers: detailed follow-up to Brain Attack Coalition comprehensive stroke center recommendations: a statement for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2011 Mar;42(3):849-77. [PubMed](#)

Quinn TJ, Dawson J, Walters MR, Lees KR. Reliability of the modified Rankin Scale. *Stroke*. 2007 Nov;38(11):e144; author reply e145. [PubMed](#)

Rankin J. Cerebral vascular accidents in patients over the age of 60. II. Prognosis. *Scott Med J*. 1957 May;2(5):200-15. [PubMed](#)

Schwamm LH, Holloway RG, Amarenco P, Audebert HJ, Bakas T, Chumbler NR, Handschu R, Jauch EC, Knight WA 4th, Levine SR, Mayberg M, Meyer BC, Meyers PM, Skalabrin E, Wechsler LR, American Heart Association Stroke Council, Interdisciplinary Council on Peripheral Vascular Disease. A review of the evidence for the use of telemedicine within stroke systems of care: a scientific statement from the American Heart Association/American Stroke Association. *Stroke*. 2009 Jul;40(7):2616-34. [94 references] [PubMed](#)

The Joint Commission. Disease-specific care certification program. Comprehensive stroke: performance measurement implementation guide. Oakbrook Terrace (IL): The Joint Commission; 2015 Mar. 278 p.

Tissue plasminogen activator for acute ischemic stroke. The National Institute of Neurological Disorders and Stroke rt-PA Stroke Study Group. N Engl J Med. 1995 Dec 14;333(24):1581-7. [PubMed](#)

Wilson JT, Hareendran A, Hendry A, Potter J, Bone I, Muir KW. Reliability of the modified Rankin Scale across multiple raters: benefits of a structured interview. Stroke. 2005 Apr;36(4):777-81. [PubMed](#)

Primary Health Components

Ischemic stroke; intravenous (IV) thrombolytic (t-PA) therapy; intra-arterial (IA) thrombolytic (t-PA) therapy; mechanical endovascular reperfusion therapy; Modified Rankin Scale (mRS)

Denominator Description

Ischemic stroke patients treated with intravenous (IV) or intra-arterial (IA) thrombolytic (t-PA) therapy or who undergo mechanical endovascular reperfusion therapy (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Ischemic stroke patients for whom a 90 day (greater than or equal to 75 days and less than or equal to 105 days) Modified Rankin Scale (mRS) is obtained via telephone or in-person

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

Unspecified

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Hospital Inpatient

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Specified

Target Population Age

Age greater than or equal to 18 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Person- and Family-centered Care

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Patient-centeredness

Timeliness

Data Collection for the Measure

Case Finding Period

Unspecified

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Institutionalization

Patient/Individual (Consumer) Characteristic

Therapeutic Intervention

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

Discharges with International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Principal Diagnosis Code for ischemic stroke as defined in the appendices of the original measure documentation, AND

Patients with documented thrombolytic (intravenous [IV] or intra-arterial [IA] thrombolytic [t-PA]) therapy (ICD-9-CM Principal or Other Procedure Codes as defined in the appendices of the original measure documentation), OR

Patients with documented mechanical endovascular reperfusion therapy (ICD-9-CM Principal or Other Procedure Codes as defined in the appendices of the original measure documentation)

Exclusions

Patients less than 18 years of age

Patients who have a Length of Stay greater than 120 days
Patients admitted for *Elective Carotid Intervention* (as defined in the Data Elements)
Patients who expire during the hospital stay

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Ischemic stroke patients for whom a 90 day (greater than or equal to 75 days and less than or equal to 105 days) Modified Rankin Scale (mRS) is obtained via telephone or in-person

Exclusions

None

Numerator Search Strategy

Institutionalization

Data Source

Administrative clinical data

Paper medical record

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

- Modified Rankin Score (mRS)
- Comprehensive Stroke (CSTK) Initial Patient Population Algorithm Flowchart
- CSTK-02: Modified Rankin Score (mRS at 90 days) Flowchart

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

CSTK-02: modified Rankin Score (mRS at 90 Days).

Measure Collection Name

Advanced Certification in Disease-specific Care Measures

Measure Set Name

Comprehensive Stroke Standardized Performance Measures

Submitter

The Joint Commission - Health Care Accreditation Organization

Developer

The Joint Commission - Health Care Accreditation Organization

Funding Source(s)

All external funding for measure development has been received and used in full compliance with The Joint Commission's corporate sponsorship policies, which are available upon written request to The Joint Commission.

Composition of the Group that Developed the Measure

Unspecified

Financial Disclosures/Other Potential Conflicts of Interest

Expert panel members have made full disclosure of relevant financial and conflict of interest information in accordance with The Joint Commission's conflict of interest policies, copies of which are available upon written request The Joint Commission.

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2015 Mar

Measure Maintenance

This measure is reviewed and updated by the developing organization every 6 months.

Date of Next Anticipated Revision

2015 Jul

Measure Status

This is the current release of the measure.

The measure developer reaffirmed the currency of this measure in April 2016.

Measure Availability

Source available from [The Joint Commission Web site](#) .

For more information, contact The Joint Commission at One Renaissance Blvd., Oakbrook Terrace, IL 60181; Phone: 630-792-5800; Fax: 630-792-5005; Web site: www.jointcommission.org

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NQMC Status

This NQMC summary was completed by ECRI Institute on May 19, 2015. The information was verified by the measure developer on June 22, 2015.

The information was reaffirmed by the measure developer on April 6, 2016.

Copyright Statement

This NQMC summary is based on the original measure, which is subject to the measure developer's copyright restrictions.

Production

Source(s)

The Joint Commission. Disease-specific care certification program. Comprehensive stroke: performance measurement implementation guide. Oakbrook Terrace (IL): The Joint Commission; 2015 Mar. 278 p.

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